

# ABSTRACT

5        In a radially anisotropic sintered magnet of annular  
shape, the remanence in a radial direction of the annulus  
increases and decreases at intervals of  $90^\circ$  in a  
circumferential direction of the annulus, and the remanence  
in a radial direction over the entire circumference of the  
annulus has a maximum of 0.95-1.60 T and a minimum equal to  
10 50-95% of the maximum. In a permanent magnet motor  
comprising a plurality of stator teeth, the radially  
anisotropic annular sintered magnet is incorporated after it  
is magnetized in  $4n$  poles (wherein  $n$  is an integer of 1 to  
20) so that the boundary between N and S poles is located  
15 within the range that is centered at the radial direction  
where the remanence exhibits the minimum and extends  $\pm 10^\circ$   
therefrom in a circumferential direction. The radially  
anisotropic annular sintered magnet undergoes neither  
fracture nor cracking during the sintering and aging/cooling  
20 steps even when it is shaped to a low inner/outer diameter  
ratio and has satisfactory magnetic properties. A permanent  
magnet motor comprising the radially anisotropic annular  
sintered magnet is inexpensive and of high performance.